

OCCUPATIONAL ADJUSTMENT
OF THE BLIND

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OCCUPATIONAL ADJUSTMENT OF THE BLIND

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PSYCHOLOGICAL methods of vocational guidance can obviously play an important part in the occupational adjustment of the blind, or in fact of any disabled person. Yet the volume of work on this subject is not very great. In the last thirty years psychologists have been busy validating methods of mental measurement, and it is only natural that they should have worked on normal populations. The success that has attended this branch of scientific study now makes it possible to carry out work more extensively among abnormal populations, such as the war-disabled, whose needs are at present urgent. In this paper I propose to deal with the blind only, but it is to be hoped that other kinds of disablement will be systematically studied by psychologists, for there is probably no field where their services will be of more value.

CLASSIFICATION OF THE BLIND

For purposes of clear thought in assessing the value of mental measurements among the blind, it is convenient to divide them into certain categories.

The first category is those *blind in infancy*. Such persons are often spoken of as being born blind. This rarely happens, though many lose their sight so early in infancy as to have had no visual images that they can retain. Their whole mental life must therefore be built on non-visual perception, without the aid of remembered visual imagery. Most of these persons will enter a school for the blind at an early age, where they will receive systematic education and training specially suitable for them. Training for any skill is a lengthy process among the blind, and it also plays a greater part in proficient performance among them than among the sighted. Hence children trained from infancy in a blind-school may easily reach a higher standard of educational or manipulative performance during their period at school than those trained in the same school who lost their sight at an age when they had already had a full experience of visual imagery.

Much blindness in infancy can be averted by medical precautions, and these measures are more likely to be carried out by intelligent parents than others. Since intelligence is to some extent hereditary, the average mental level of those blind in infancy is lower than the normal for the whole population. It has already been noticed in America that the intelligence level of those blind in infancy is tending to fall, and this is taken to mean that this population is drawn more and more from the less intelligent parents as medical preventive measures come to be used more and more by intelligent parents.

Those who become *blind through illness* at any period after they have had effective experience of visual imagery form another category of the blind. The age of entering into blindness for this category is important. If they enter while young children or adolescents, they may have the necessary capacity to benefit from an education specially fitted for the blind. If they enter it in middle age they may find learning new skills too difficult. The loss of sight in some in this category may be associated with general ill health, and in so far as this is so they will not tend to be so robust as the general population. Many in this category lose their sight gradually, and there is some evidence to show that this may affect their adjustment to blindness and their capacity to learn the skills involved in this adjustment. They cling to the last remnants of sight and hope against hope that they may get better, and thus refuse to accept blindness and adapt themselves to new modes of behaviour.

Finally, there are those who are *traumatically blinded*. Most of these are war casualties. Among the civil population those blinded by war are distributed almost normally among the population and among them are found people of all ages and of either sex. Blind Service-men are not a normal sample of the population. The lowest levels of intelligence are not found among them, because such men would not have been admitted

to the Forces. The highest levels of intelligence are fewer than in the total population, since reservation has excluded from combatant service some of those following the highest types of occupation. The age-range of these men is also skewed, there being a preponderance of healthy young men at their most physically, mentally, and emotionally active period.

The *partially blind* are found in all of these categories. Such people have sufficient defect of vision to justify them being officially classified as blind. Some can detect objects on the periphery but not in the central field of vision; others may have partial central vision which varies in capacity from detecting large objects to being able to distinguish light from dark. Partial vision can play an important part in orientation, but people with similar degrees of partial vision vary considerably in their capacity to use it. This suggests that selection is involved to a large extent in the vision of the partially blind, and that the ability to use their sight may depend more on meaningful attention than on visual capacity. Enough has been said to show how heterogeneous is the population of the blind and how much caution we should use before accepting experimental results based on limited and often ill-defined groups. The blind have only their blindness in common; in all other factors they may differ, and it is these other factors which are so important in their occupational adjustment.

INTELLIGENCE TESTS—ORIENTATION

A fair amount of work has been done on measuring the intelligence of blind children. The results of some of the experiments are rather inconclusive, for the experimental populations have not been clearly defined, and we know neither how many had partial vision nor the age of entering into blindness. Both these factors must affect performance as a measure of pure intelligence; they need not, however, affect test performance if it is regarded only as a measure of the capacity to perform certain tasks. To use intelligence tests to compare directly the mental ability of the blind with that of the sighted appears a doubtful procedure, for no test can be a fair measure of ability for those depending solely on non-visual percepts and for those with normal vision.

The method Miss I. W. Langon is pursuing is a more reliable technique. She is trying to construct a test which will give normal age-distribution among blind children similar to that given by the Binet test among sighted children. In so far as she is successful over the whole age-range—and her present results give every indication that she will be—she will be able to say for a blind child where his score falls on the frequency distribution curve. Since there is a significant correlation between intelligence tests, it follows that those whose scores fall at any point on the normal curve of one test have an intelligence which does not differ significantly from that of those whose score falls at a similar point on the curve of another test which gives a normal age-distribution. In this way a fair measure of mental ability among the blind comparable with that of the sighted will be available.

Several experiments have been carried out on the orientation of the blind, mainly to determine the factors involved in it. The results are contradictory, which seems almost inevitable from the experimental technique adopted. This has usually consisted of experimentally eliminating a single receptor mechanism, such as smell or hearing, as a result of which orientation deteriorates. This is taken to mean that orientation is mainly based on the eliminated receptor. These results are equally open to the interpretation that orientation is a complex factor depending on the interaction of several receptor mechanisms; and that, when one of these is temporarily out of action, the balance of the blind man's perceptual field is disturbed. Possibly if he had time to adjust to the altered circumstances he might be able to reach a satisfactory degree of orientation based on fewer perceptual cues, but this is not possible under normal experimental conditions.

The actual basis of orientation is not so important vocationally as variations in the capacity, and these are considerable. It is probable that these variations are not primarily determined by differences in sensory acuity but by differences in the capacity to select and interpret meaningful cues from a total presentation and

them into the mental continuum. The fact that blind persons often do not distinguish as disparate the points of a compass far wider apart than the dots of the Braille alphabet, while being able to read Braille with ease, shows how much meaning must enter into these perceptual cues.

S. P. Hayes¹ has done a series of carefully controlled experiments on what he calls the "vicariate of the senses"—i.e., the commonly held belief that the non-visual sensory receptors are more sensitive among the blind than among the sighted. The general conclusion drawn from these experiments and others in the same field is that the non-visual sensory receptors of the blind are not more sensitive than those of the sighted: in fact, in some cases they are less so. Touch, when measured at sensory level, is often inferior among the blind because the skin at the finger-tips is thickened by constant use. The blind do, however, after training and experience, develop an amazing capacity for exploring and adjusting to the outside world; but this is not because of their greater sensory acuity but because they have to pay attention to non-visual perceptual cues which can be largely disregarded by the sighted owing to their predominant reliance on visual cues.

Some of the experiments I have done and discussions I have had with cultured blind persons indicate that conscious inference enters more in the non-visual perceptual field of the blind than the more immediate type of recognition involved in visual perception. If this is so, it means that intelligence is more concerned with orientation among the blind than among the sighted. There is considerable variation in capacity for orientation among the blind, and these variations play a dominant part in their occupational adjustment. It is important, therefore, to discover the mental factors involved in orientation. All the work so far goes to show that these are more likely to be found at the level of meaningful selection and inference than at that of sensory acuity.

SUGGESTED TESTS

A brief description of some of the tests I have devised will show the line of approach I think may be useful. These tests are meant only for adults who have been traumatically blinded; they would probably not be suitable for other categories of blind persons, for remembered visual imagery is involved in some of the tests.

(1) A simple oral intelligence test suitable for differentiating roughly between those with the mental ability suitable for unskilled, semi-skilled, and skilled occupations. This test is based largely on the experience I have gained in testing the intelligence of adults for occupational ability. It involves repetition of numbers, analogies, opposites, simple mental arithmetic, remembering the details of letters. These latter two questions involve special ability and knowledge, but they embrace factors vital to the blind man's adjustment to the sighted world and are therefore important vocationally.

(2) A more difficult mental test, suitable only for those who have done well on the first test and may be capable of undertaking important administrative posts. This consists of directions to be precisely carried out, instructions to be carried out with varying choice of means, difficult reasoning, and adjustment to social situations.

(3) The following tests are all designed as a preliminary attempt to examine variations in orientation:

- A cube-construction test depending on tactual cues.
- A form board depending on tactual cues.
- An apparatus for measuring judgment of distance depending on touch and kinæsthetic sensation.
- An apparatus for judging size depending on touch.
- An apparatus for judging weight.
- An apparatus to measure accuracy of movement depending solely on kinæsthetic sensation.

These tests have been tried in the laboratory and on a few blind persons. They appear to differentiate significantly between individuals and to correspond in the blind to what is known of their general performance. The data are not yet sufficient to warrant definite conclusions, but they are sufficient to warrant using the tests experimentally.

It will be difficult to get satisfactory criteria of the value of the tests because of the heterogeneity of the

blind population and the various types of occupations they enter. The best that can be expected will be something like the criteria for vocational guidance as opposed to those of vocational selection. It is an important matter to decide a blinded man's occupation because of the lengthy training that is necessary. If, as the training proceeds, it is found that he is unsuitable for the occupation, another lengthy period of training must be started. This is a disappointing experience for the men, for they naturally want to become self-supporting as soon as possible and return to their normal family life. It is probable that the use of psychological tests will help in deciding what occupation a man should train for and will lessen the chance of failure. Failure to complete a training course not only wastes much time but also in the blind may easily lead to a feeling of frustration which it is important to avoid. This failure may be attributed to their blindness and lead to a depressed attitude towards learning another occupation. Failure to learn the skill necessary for an occupation may, in fact, be more determined by mental qualities than by blindness; if these were systematically examined before starting the training for an occupation, much disappointment to the blind might be saved.

EMOTIONAL ADJUSTMENT AND EMPLOYMENT

An essential part of the occupational adjustment of the blind is at the emotional level. Sudden blindness is a great shock to a young and healthy man with his natural feelings of independence. For the most part the adjustment of St. Dunstan's men is amazing. This is largely due to the sensible way in which the men are treated and the atmosphere of cheerful independence that permeates the place.

An emotional shock, such as blindness may produce, accentuates the characteristics of the individual and brings to the surface latent aspects of personality. It may also precipitate certain conflicts which may not have disturbed the previous life of the blinded but may become very crippling under the added strain of blindness. Such men need the help of a psychiatrist if they are to make a satisfactory adjustment.

For the most part the blinded show a degree of well-balanced courage which is a magnificent example of human nature at its best. This courageous attitude, if affected by emotional disorganisation, may develop into over-compensation and take a fantasy form, instead of the more useful form of well-directed effort on training and the overcoming of difficulties.

The more recessive type of character learns naturally to adjust to blindness by quiet application to work and a well-balanced limitation of his demands on life. With the emotionally disturbed this attitude may easily develop into a retreatist attitude which will add greatly to the difficulty of occupational and social adjustment.

Perhaps the most surprising thing about St. Dunstan's is the relatively small number of men who are emotionally disturbed when one might have expected it to be otherwise. Coming to St. Dunstan's as soon as they are medically in the condition to do so is an important factor in their emotional rehabilitation. If an unduly long period elapses between entering into blindness and coming under expert care, men may easily fall into a false emotional attitude towards their blindness which may retard their adjustment.

Adjustment of the blind to many simple routine occupations is not difficult. Many blind persons are working in ordinary factories, and their output is not less than that of the sighted and is often greater, probably because they are not so easily distracted. Many blind persons of superior mental and social ability have held and are holding important administrative posts. Such men should have the kind of ability that would raise them to positions carrying a private secretary. They also need considerable capacity in orientation, so as to fit naturally into the changing circumstances of their environment. There is greater difficulty in placing men whose qualifications suit them for occupations in the middle range, but this is being systematically undertaken by St. Dunstan's. One of the difficulties is the prejudice of employers. There are, however, many notable exceptions, and every blind man successfully placed increases the chances of placing others. Prejudice is overcome by seeing the extent to which the blind can adjust if properly selected, trained, and given suitable opportunities of employment.

¹ Contributions to a Psychology of Blindness. New York: American Foundation for the Blind. 1941.

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